FORSPAN ASSESSMENT MODEL FOR CONTINUOUS ACCUMULATIONS-BASIC INPUT DATA FORM (NOGA, Version 7, 6-30-00)

IDENTIFICATION INFORMATION

Ass	sessment Geologist:	S.B. Roberts					Date:	8/20/2002
Re	gion:	North Americ	а				Number:	5
Pro	vince:	Southwesterr	n Wyoming				Number:	5037
Tot	al Petroleum System:.	Wasatch-Gre	en River Com	posite			Number:	503709
	sessment Unit:	Wasatch-Gre	en River Coall	bed Gas			Number:	50370981
Bas	sed on Data as of:							
No	tes from Assessor	Analog: And	erson coals, W	/asatch For	mation Coall	oed Gas in	Powder Riv	er Basin
		CHAR	ACTERISTIC	S OF ASSE	SSMENT U	NIT		
					·	_		
	sessment-Unit type:					Gas	A III	
	at is the minimum tota			0.02 (n	imbo for oil <i>F</i>	A.U.; bctg t	or gas A.U.)	
	mber of tested cells: mber of tested cells with		ner cell > min	imum:		0		
	ablished (>24 cells > min.)		ontier (1-24 cell			lypothetical	(no cells)	X
Me	dian total recovery per	cell (for cells >	min). (mmbo i	for oil A U:	bcfg for gas	AU)	(HO CCHS)	
	and it total root ory por	1st 3rd disc			2nd 3rd	,,	3rd 3rd	
						,		
As	sessment-Unit Probab	ilities:						
_	<u>Attribute</u>				bility of occu			
	CHARGE: Adequate pe	_				- —		1.0
	ROCKS: Adequate rese	•						1.0
3. 1	FIMING: Favorable geo	logic timing for	an untested c	ell with tota	l recovery <u>></u> r	minimum		1.0
4.	accoment Unit CEOL		:4 /Draduct a	(1 0 and 0	٥١.		1.0	
AS	sessment-Unit GEOLC	JGIC Probabili	ity (Product o	1 1, 2, and 3	5):		1.0	=
4	ACCESS: Adequate loc	ation for neces	sarv netroleun	n-related ac	tivities for an	untested	cell	
T. 7	-	overy <u>></u> minimu	• •					1.0
	NO. OF UNTESTED C	ELLS WITH P	OTENTIAL FO	R ADDITIO	ONS TO RES	SERVES IN	THE NEXT	30 YEARS
	T-1-1			- C				
1.	Total assessment-unit	area (acres): (•		,	66E 000	mavimum	724 000
			minimum <u>5</u>	98,000	median _	005,000	maximum	731,000
2.	Area per cell of unteste	ed cells having	notential for a	dditions to i	reserves in n	ext 30 vea	rs (acres):	
	(values are inherently	_	potorniai ioi a	daniono to i		om oo you	(40.00).	
	calculated mear	,	minimum	40	median	80	maximum	140
					_			
3.	Percentage of total ass	sessment-unit a	area that is unt	tested (%):	(uncertainty	of a fixed	value)	
			minimum	100	median _	100	maximum	100
	Demonstrate for the territory				16	- 4		
4.	Percentage of untested			•			es in	
	next 30 years (%): (a i	-		ai recovery	-	•	maximum	15
	(uncertainty of a fixed v	value)	minimum	<u> </u>	median _	6	maximum	15

TOTAL RECOVERY PER CELL

Total recovery per cell for untested cells having potential for additions to reserves in next 30 years: values are inherently variable)						
(mmbo for oil A.U.; bcfg for gas A.U.)	minimum _	0.02	median _	0.1	maximum	0.8
AVERAGE COPRODUCT RA					COPRODUCT	s
Oil assessment unit:		fixed but unk minimum	nown values	median		maximum
Gas/oil ratio (cfg/bo)				median		maximam
NGL/gas ratio (bngl/mmcfg)			_		-	
Gas assessment unit:						
Liquids/gas ratio (bliq/mmcfg)	·····	0	_	0	_	0
SELECTED		Y DATA FOI e inherently \		D CELLS		
Oil assessment unit:		minimum	ranabic)	median		maximum
API gravity of oil (degrees)				modian		maximam
Sulfur content of oil (%)	-	_	_		-	
Drilling depth (m)			_		_	
Depth (m) of water (if applicable)			_		_	
Depth (iii) of water (ii applicable)	_		_		_	
Gas assessment unit:						
Inert-gas content (%)		2.00		3.00		4.00
CO ₂ content (%)		3.00	_	5.00	_	8.00
Hydrogen-sulfide content (%)		0.00	_	0.00	_	0.00
Drilling depth (m)		60	_	200	_	400
Depth (m) of water (if applicable)			_		-	
Success ratios: calculated mean	ı	minimum		median		maximum
Future success ratio (%) 41	•	20		40		70
Historic success ratio, tested cells (%)	_		_		-	

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO STATES

Surface Allocations (uncertainty of a fixed value)

1. Colorado	represents	12.66	areal % of the asse	essment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit:				
Volume % in entity			0	
2. Wyoming	_represents_	87.34	areal % of the asse	essment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			99	
3	_represents_		areal % of the asse	essment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
4	_represents_		areal % of the asse	essment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				

5	represents	areal % of the assess	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum		
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)					
6	represents	areal % of the assess	sment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum		
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)					
7	represents	areal % of the assess	sment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%) Gas in gas assessment unit:	minimum	median	maximum		
Volume % in entity Portion of volume % that is offshore (0-100%)					
8	represents	areal % of the assess	sment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum		
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)					

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO LAND ENTITIES Surface Allocations (uncertainty of a fixed value)

1. Federal Lands	_represents_	70.44	_areal % of the assess	ment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			<u>65</u> 0	
2. Private Lands	_represents_	24.97	_areal % of the assess	ment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			33 0	
3. Tribal Lands	_represents_		_areal % of the assess	ment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median	maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
4. Other Lands				
	represents		_areal % of the assess	ment unit
Oil in oil assessment unit: Volume % in entity	_represents_ minimum		_areal % of the assess median	ment unit maximum
Oil in oil assessment unit:			_	
Oil in oil assessment unit: Volume % in entity			_	

	areal % of the assessment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	median maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	<u>1</u>
6. WY State Lands represents 3.69	areal % of the assessment unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	median maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	
7represents	areal % of the assessment unit
Oil in oil assessment unit: minimum Volume % in entity Portion of volume % that is offshore (0-100%)	median maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	
8represents	areal % of the assessment unit
Oil in oil assessment unit: minimum	median maximum
Volume % in entity	
Volume % in entity Portion of volume % that is offshore (0-100%)	

9	represents	areal % of the assessn	sment unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median 	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
10	represents	areal % of the assessn	nent unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
11	represents	areal % of the assessn	nent unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
12	_represents	areal % of the assessn	nent unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO FEDERAL LAND SUBDIVISIONS Surface Allocations (uncertainty of a fixed value)

Bureau of Land Management (BLM)	represents	70.44	areal % of the ass	sessment unit
Oil in oil assessment unit:	minimum		median	maximum
Volume % in entity				
Portion of volume % that is offshore (0-100%)				
Gas in gas assessment unit:				
Volume % in entity			65	
Portion of volume % that is offshore (0-100%)			0	
2. BLM Wilderness Areas (BLMW)	_represents_		areal % of the ass	sessment unit
Oil in oil assessment unit:	minimum		median	maximum
Volume % in entity				
Portion of volume % that is offshore (0-100%)				
Gas in gas assessment unit:				
Volume % in entity				
Portion of volume % that is offshore (0-100%)				
3. BLM Roadless Areas (BLMR)	_represents_		areal % of the ass	sessment unit
Oil in oil assessment unit:	minimum		median	maximum
Volume % in entity				
Portion of volume % that is offshore (0-100%)				
Gas in gas assessment unit:				
Volume % in entity				
Portion of volume % that is offshore (0-100%)				
4. National Park Service (NPS)	_represents_		areal % of the ass	sessment unit
Oil in oil assessment unit:	minimum		median	maximum
Volume % in entity				
Portion of volume % that is offshore (0-100%)				
Gas in gas assessment unit:				
Volume % in entity				
Portion of volume % that is offshore (0-100%)				

5. NPS Wilderness Areas (NPSW)	represents	areal % of the assessmen	t unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median n	naximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			
6. NPS Protected Withdrawals (NPSP)	represents	areal % of the assessmen	t unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median n	naximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			
7. US Forest Service (USFS)	represents	areal % of the assessmen	t unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median n	naximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			
8. USFS Wilderness Areas (USFSW)	represents	areal % of the assessmen	t unit
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median n	naximum
Gas in gas assessment unit: Volume % in entity			

9. USFS Roadless Areas (USFSR)	represents	areal % of the assessi	ment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
10. USFS Protected Withdrawals (USFSP)	represents	areal % of the assessi	ment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
11. US Fish and Wildlife Service (USFWS)	represents	areal % of the assessi	ment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
12. USFWS Wilderness Areas (USFWSW)	represents	areal % of the assessi	ment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			

13. USFWS Protected Withdrawals (USFWSP)	represents	areal % of the assess	sment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
14. Wilderness Study Areas (WS)	represents	areal % of the assess	sment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
15. Department of Energy (DOE)	represents	areal % of the assess	sment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
16. Department of Defense (DOD)	represents	areal % of the assess	sment unit
Oil in oil assessment unit:	minimum	median	maximum
Volume % in entity			
Portion of volume % that is offshore (0-100%)			
Gas in gas assessment unit:			
Volume % in entity			
Portion of volume % that is offshore (0-100%)			

17. Bureau of Reclamation (BOR)	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity				
Portion of volume % that is offshore (0-100%)				
18. Tennessee Valley Authority (TVA)	represents	areal % of the assessm	nent unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median 	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
19. Other Federal	represents	areal % of the assessm	nent unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity				
20	_represents	areal % of the assessm	nent unit	
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median 	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO ECOSYSTEMS Surface Allocations (uncertainty of a fixed value)

Greater Green River Basin (GGRV)	_represents_	100.00	_areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median		maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)			100		
2	_represents_		_areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median		maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)					
3	_represents_		_areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median		maximum
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)					
4	_represents_		_areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum		median		maximum
Gas in gas assessment unit: Volume % in entity					
Portion of volume % that is offshore (0-100%)					

5	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
6	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
7	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
8	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				

9	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median 	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
10	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
11	represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
12	_represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				

ALLOCATIONS OF POTENTIAL ADDITIONS TO RESERVES TO LAND ENTITIES Subsurface Allocations (uncertainty of a fixed value)

Based on Data as of:				
All Federal Subsurface	_represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				
Other Subsurface	_represents	areal % of the assessment unit		
Oil in oil assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)	minimum	median 	maximum	
Gas in gas assessment unit: Volume % in entity Portion of volume % that is offshore (0-100%)				